



B.C. Innovation Summit (Vancouver, B.C.)
Economic Impacts of Incremental Innovation
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Speech delivered by Hugh O'Neill
President and CEO, Sanofi Canada
Montreal, QC

Hello everyone.

As mentioned in the introduction, I'm the CEO of Sanofi Canada. We're part of the global Sanofi Group, one of the world's largest healthcare companies with 105,000 employees in 110 countries.

We have expertise in diabetes, oncology and cardiology, and are also active in rare genetic diseases and multiple sclerosis. We are the world's largest producer of vaccines and a leader in animal health.

Canada's productivity problem

Previous speakers have covered a lot of ground on innovation and productivity. As you'll remember, one of the most preoccupying points is the serious productivity problem we have in Canada. We rank in the lowest quartile of our fellow OECD countries in terms of productivity. This doesn't bode well for our future or the future of our children.

We as a society will have to tackle our productivity problem on many different fronts. In my remarks this morning, I'd like to approach it from a people perspective.

The burden of chronic disease

I think you'll agree that to keep people productive, you have to keep them healthy. People don't perform their best when they don't feel well.

One of the biggest problems affecting our productivity as a nation is the prevalence of chronic diseases; for example, diabetes, heart disease, obesity and the complications they cause. Workers with three or more chronic disease risk factors miss work 50% more often than those without risk factors. Absenteeism due to chronic disease costs Canadian employers nearly \$16 billion annually.

To help manage the chronic disease problem, we naturally turn to our healthcare system. But there's a catch. Our healthcare system was created to respond to the challenges of the day: treating acute illness or injury in a hospital setting. It was **not** designed to help people who live for decades with chronic conditions.

As it turns out, the prevalence of chronic disease is making the entire healthcare system unwell, because we're simply not set up to manage it efficiently.

Healthcare is already consuming close to 50% of provincial budgets. And one of the biggest drivers of these spiralling costs is chronic disease. In fact, it accounts for about 75% of them.



To turn this situation around, and give people the care they need to stay productive, we'll need to rely on innovation. Innovation, both incremental and radical, has already helped us make great strides in improving healthcare over the decades.

Let's take a look at what we've gained, and what we can expect, from three solutions: 1) innovative medicines, 2) innovative partnerships, and 3) innovative approaches.

Value of innovative medicines

Innovative medicines have long proven their worth in helping people live longer, healthier and more productive lives.

Some of these treatments are the result of radical innovation: the discovery of insulin in the early 1920s, for example. Overnight, it made the difference between life and death for people with type 1 diabetes.

Some of these treatments are the result of incremental innovation: the gradual improvement of existing medicines to reduce side effects or make them easier to take. Insulin itself has benefited from these improvements over the decades. We made it easier to tolerate. We made long-lasting versions so people could sleep through the night. We made short-acting versions to manage blood sugar spikes at mealtimes.

Whether they're the result of radical or incremental innovation, innovative drugs have brought benefits to countless lives. How many people do you know who take a pill to manage their cholesterol levels or blood pressure? We think nothing of it, but without these treatments, maybe these people wouldn't be able to support their families or engage in the daily activities healthy people take for granted.

New medicines can also lessen demands on other parts of the healthcare system by reducing hospital stays and surgeries. The prevention of just one stroke through drug treatment saves \$50,000 on average over the first six months. Stomach ulcers are now treated in an outpatient setting, in combination with medicine. This makes the healthcare system more efficient and frees up resources that can be invested in other areas.

That's why I say part of the solution involves continuing the search for innovative medicines, creating a business environment that encourages investment and science, and making these discoveries available to healthcare professionals and patients.

Innovative partnerships

The statistics show that drug therapy has a lot to offer. But to cure what ails our healthcare system – and make our citizens more productive – we need to find ways to innovate in all aspects of healthcare delivery, not just drugs. That means working with everyone who interacts with a patient, and getting the right people to do the right thing at the right time.

In many parts of Canada this search for innovative solutions is well underway.

Let me tell you about a project that's going on right now in Quebec. It's a unique partnership between the government of Quebec, healthcare professionals and administrators, pharma companies and even an IT company.

We are trying to show that a concerted approach to managing chronic disease can make people healthier and save money at the same time.

So far over 2,000 patients are taking part. They are receiving personalized treatment based on established protocols. We are using information technology to ensure they get timely follow-up from the right professionals, including nurses, social workers and nutritionists. We think we can achieve at least a 50-percent gain in efficiency in treating chronic disease and the results so far are promising.



I would say this represents a welcome advancement in social innovation. A couple decades ago, we probably wouldn't have opted for this type of multi-disciplinary approach. It's a perfect example of many stakeholders identifying a problem and tackling it in a new way.

Innovative approach

The third part of the solution also involves social innovation, in that we are approaching the problem of chronic disease in a new way. Traditionally, our R&D would target a disease, trying to understand it, then identifying a drug to manage or cure it. We did not take into account the patient's experience as a whole.

We're doing things differently now: taking patients' needs as a starting point, and coming up with solutions based on those needs.

Let me give you an example. Sanofi has been providing insulin to treat diabetes for 90 years. As I mentioned earlier, we have made many incremental improvements to insulin over the decades. These improvements made a great impact in people's lives but addressed only one aspect of diabetes management.

Today, our expanded diabetes offering includes insulin injection pens, blood glucose monitors and, soon, a web-based platform to help people manage their blood sugar levels. The program includes free sessions with a health and wellness coach who will help patients make changes in their daily routine to be successful with their health-related goals.

This approach goes well beyond insulin by empowering people to take charge of their own disease. After all, doctors, nurses and dietitians are critical partners, but they can't be with their patients every hour of every day. The "empowered patient" is a key player in healthcare treatment today. And a key component in helping people with diabetes and other chronic conditions lead healthier and more productive lives.

We are confident that our efforts to remain innovative, through our products and our approaches, will contribute effectively to the building of a sustainable healthcare system that meets the challenges we face in Canada today.

Conclusion

I've strayed a bit into the realm of healthcare, but I think that's forgivable because our health impacts virtually every other aspect of our lives. I hope I've shown how innovative approaches to healthcare can have a positive impact on our productivity, our economy and our lives as a whole.

I look forward to hearing the next speakers discuss the impact of innovation in their specific industries.

Thank you.